

SMITHSONIAN Zoogoeer

FRIENDS OF THE NATIONAL ZOO

2013 CALENDAR



The Science of **SURVIVAL**

As the wild world shrinks, the Smithsonian's National Zoo is **creating a cutting-edge ark.**

All around the globe, human actions—particularly habitat destruction, pollution, and poaching—are taking a grim toll on wildlife. By 2100, many scientists fear, half the planet's species may be extinct.

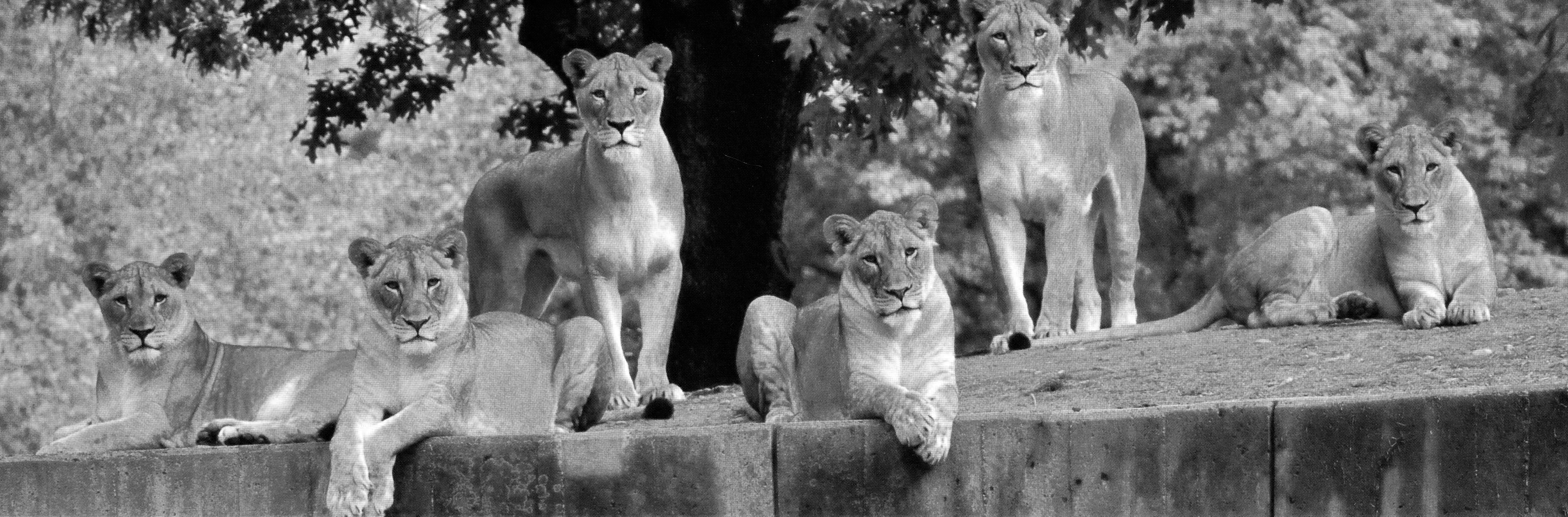
That dire prognosis deepens the urgency of the Zoo's efforts to help its inhabitants be fruitful and multiply. For creatures great and small, from mighty lions to wee anemones, Zoo scientists and animal care staff find ways to let nature take its course—and nudge it along if necessary.

Assisting nature takes a variety of forms. One of the most important is artificial insemination (AI), which enables Zoo staff to breed animals who make a good genetic match but might not mate the old-fashioned way. AI also lessens the need for costly and potentially stressful moves of animals between zoos. Reproductive specialists at the Zoo's Smithsonian Conservation Biology Institute (SCBI) have successfully used AI to breed Asian elephants, cheetahs, giant pandas, and other endangered animals, including some that have gone extinct in the wild.



Another element of the Zoo's reproductive work is the SCBI endocrinology lab, located in Front Royal. Experts there have made vital discoveries about animals' hormonal cycles, enabling Zoo staff to better understand reproductive processes and determine the best timing for introducing potential mates or attempting AI. SCBI endocrinologists have also pioneered techniques for extracting and studying hormones from feces or urine, eliminating the need

for drawing blood. As this new year unfolds, you'll encounter a dozen animals that exemplify the Zoo's commitment to reproductive science. Each is a triumph of scientific inquiry and devoted animal care—and a step toward the survival of creatures who enrich life on the small, fragile planet we all share.



TAKE PRIDE IN YOUR MEMBERSHIP

Your membership matters. Your participation in Friends of the National Zoo bolsters our ability to support top-notch animal care, robust educational programs, pioneering scientific research, and vitally needed conservation efforts. FONZ is deeply grateful for your aid in, as our mission statement puts it, “building a society committed to restoring an endangered natural world.”

Many of you go beyond simply belonging to FONZ. On your visits to the park, you patronize our shops and food concessions, boosting the Zoo’s revenue. You contribute to our annual appeals, helping us sustain important Zoo

projects and priorities. Your children attend our camps, classes, and birthday parties. You spread the word about the Zoo and its work by purchasing Adopt a Species packages and gift memberships. You enjoy our special events, from Boo at the Zoo to ZooFari, at discounted member rates, and you bring your family and friends. Thank you all for your support.

FONZ owes a special debt of gratitude to members who also serve as volunteers. More than 1,500 of you lend your time and talents to the Zoo, working as guides, exhibit interpreters, keeper aides, behavior watchers, special event

helpers, and more. Together, you donate nearly 100,000 hours of service—valued at more than \$3 million—each year. Thank you, volunteers!

This year’s calendar showcases the work of an increasingly important corps of volunteers: the FONZ Photo Club. Membership in the Photo Club is open to photographers of all skill levels. The group meets monthly to hear guest speakers and to share and discuss members’ work. The club’s dedication to capturing beautiful images of life at the Zoo and its generosity in allowing us to use them in our communications are truly invaluable, as this year’s calendar demonstrates. Thank you, Photo Club members!

No matter what shape your FONZ membership takes, whether you drop by often or visit mainly through the pages of Smithsonian Zoogoer, we appreciate your belonging to the FONZ community and thank you for supporting the work of the Smithsonian’s National Zoo. In this time of myriad threats to wildlife, your membership matters.



JANUARY



Cuddly as they look here, the Zoo's **lion cubs** (top), born in 2010, are growing into powerful predators capable of taking down a 500-pound wildebeest or 1,000-pound zebra. In a lion pride, females handle the bulk of the hunting, but males then muscle in on the kill and eat first. A hungry adult male may gobble 50 pounds of meat in a single meal, then fast for several days. Cubs get whatever remains after the adults have eaten.

Main Photo: Cynthia Anderson
Inset Photo: Mehgan Murphy/NZP

AT THE ZOO

Years of painstaking planning and carefully orchestrated animal introductions paid off when Luke, our male, bred with females Naba and Shera, who together produced seven cubs in 2010.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<div>December 2012</div> <div>S M T W T F S</div> <div>1</div> <div>2 3 4 5 6 7 8</div> <div>9 10 11 12 13 14 15</div> <div>16 17 18 19 20 21 22</div> <div>23 24 25 26 27 28 29</div> <div>30 31</div>	<div>February 2013</div> <div>S M T W T F S</div> <div>1 2</div> <div>3 4 5 6 7 8 9</div> <div>10 11 12 13 14 15 16</div> <div>17 18 19 20 21 22 23</div> <div>24 25 26 27 28</div>	<div>1</div> <div>New Year's Day ZooLights</div>	<div>2</div>	<div>3</div>	<div>4</div>	<div>5</div>
<div>6</div>	<div>7</div>	<div>8</div>	<div>9</div>	<div>10</div>	<div>11</div>	<div>12</div>
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<div>20</div>	<div>21</div> <div>Martin Luther King, Jr. Day</div>	<div>22</div>	<div>23</div>	<div>24</div>	<div>25</div>	<div>26</div>
<div>27</div>	<div>28</div>	<div>29</div> <div>FONZ Summer Camp Priority Registration begins Visit fonz.org/join.htm to join or upgrade your mem- bership and be eligible.</div>	<div>30</div>	<div>31</div>		



FEBRUARY



Breeding is truly for the birds at the National Zoo. Animal care staff and reproductive scientists have succeeded in hatching even notoriously difficult-to-breed birds, such as the **Micronesian kingfisher** (top) and **kori bustard** (above). The former is one of the rarest species on Earth, and the subspecies on exhibit at the Bird House has been extinct in the wild for two decades. Only about 130 exist in human care. Native to eastern and southern Africa, kori bustards are the heaviest birds that can fly.

Main Photo: Jim and Pam Jenkins
Inset Photo: Mehgan Murphy/NZP

AT THE ZOO

The Zoo has hatched some 50 kori bustards since 1997—more than any other American zoo. In 2010, the Association of Zoos and Aquariums honored the Zoo’s kori bustard team for its success in propagating the species, which is declining in the wild.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			<div>January 2013</div> <div>S M T W T F S</div> <div>1 2 3 4 5</div> <div>6 7 8 9 10 11 12</div> <div>13 14 15 16 17 18 19</div> <div>20 21 22 23 24 25 26</div> <div>27 28 29 30 31</div>	<div>March 2013</div> <div>S M T W T F S</div> <div>1 2</div> <div>3 4 5 6 7 8 9</div> <div>10 11 12 13 14 15 16</div> <div>17 18 19 20 21 22 23</div> <div>24 25 26 27 28 29 30</div> <div>31</div>	1	2
					Black History Month begins	Groundhog Day
3	4	5	6	7	8	9
		FONZ Summer Camp Registration begins				Woo at the Zoo
10	11	12	13	14	15	16
Chinese New Year		Lincoln's Birthday Mardi Gras	Ash Wednesday	Valentine's Day Wow your sweetheart with an adopted Zoo animal at fonz.org/adopt.htm .		
17	18	19	20	21	22	23
	Presidents' Day				Washington's Birthday	
24	25	26	27	28		



MARCH



It’s not easy being green—or yellow, or orange, or any of a rainbow of hues—for amphibians in today’s world. Researchers believe that 42 percent of the nearly 6,000 amphibian species are at risk of extinction, perhaps in our lifetime. In 1999, scientists from the National Zoo and the University of Maine identified a key cause of the baffling decline: a fast-spreading fungal infection known as chytrid. The disease has contributed to the extinction of 122 amphibian species since 1980.

Main Photo: Mark Van Bergh Photography
Inset Photo: Mehgan Murphy/NZP

AT THE ZOO

With wild populations in peril, scientists and animal care staff leaped into action, creating “insurance” collections at zoos and reserves. Species successfully bred at the Zoo include **lemur frogs** (top) and **Panamanian golden frogs** (above).

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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					Women’s History Month begins	National Zoological Park established, 1889
					International Women’s Day	
10	11	12	13	14	15	16
Daylight Saving Time begins						
17	18	19	20	21	22	23
St. Patrick’s Day			Vernal Equinox			
24	25	26	27	28	29	30
Palm Sunday						
31			Snore & Roar and Conservation Campout Priority Registration begins Visit fonz.org/join.htm to join or upgrade your membership and be eligible.		Good Friday	
Easter	Passover begins at sundown					



APRIL



Giant anteaters get their name from their large bodies (up to seven feet long and weighing as much as 100 pounds) and their diet. Native to Central and South America, the animal uses its keen sense of smell to locate anthills and termite mounds, which it tears open with strong claws. The anteater then sticks its sticky, two-foot-long tongue into the debris, gathering a crunchy repast that its muscular stomach will grind up and digest. Wild anteaters also eat fruit and birds' eggs.

Main Photo: Meghan Murphy/NZP
Inset Photo: Lori J. DuCharme

AT THE ZOO

Scientists estimate that the number of giant anteaters in the wild has dropped by 30 percent since 2000. To help build the population in human care, the Zoo has bred three pups since 2007.

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	<div>1</div> <div>Easter Monday: Celebrating the African American Family Tradition</div> <div>Kids’ Farm Month begins</div>	<div>2</div> <div>Snore & Roar and Conservation Campout Registration begins</div>	<div>3</div>	<div>4</div>	<div>5</div>	<div>6</div>																																																																																			
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<div>14</div>	<div>15</div> <div>Tax Day</div>	<div>16</div>	<div>17</div>	<div>18</div>	<div>19</div>	<div>20</div> <div>Earth Day celebration: Party for the Planet</div>																																																																																			
<div>21</div>	<div>22</div> <div>Earth Day</div>	<div>23</div>	<div>24</div>	<div>25</div>	<div>26</div> <div>Arbor Day</div>	<div>27</div>																																																																																			
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MAY



The largest lizards on Earth, **Komodo dragons** live only on a few Indonesian islands and number perhaps 3,000 in the wild. Ten feet long and usually weighing about 150 pounds, this intelligent reptile uses its forked tongue to “sniff” the air and detect the scent of a goat, boar, deer, or other prey. The dragon then waits patiently until the animal draws near, ambushing it with fierce claws and sharp, serrated teeth.

Main Photo: Jon McRay
Inset Photo: Jessie Cohen/NZP

AT THE ZOO

The first Komodo dragons ever hatched outside Indonesia emerged from their large, leathery eggs at the Zoo’s Reptile Discovery Center in 1992. In all, the Zoo has hatched 55 dragons, shared with zoos around the globe.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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5 <div>Cinco de Mayo</div>	6	7	8	9	10	11 <div>International Migratory Bird Day</div>
12 <div>Mother's Day Delight Mom with an ad- opted Zoo animal at fonz.org/adopt.htm.</div>	13	14	15	16 <div>ZooFari</div>	17	18 <div>Armed Forces Day</div>
19	20	21	22	23	24	25
26	27 <div>Memorial Day</div>	28	29	30	31	



JUNE



Between 2005 and 2010, no **Andean bear** cub born in a North American zoo lived more than a week. That changed in January 2010, when the Zoo's Billie Jean delivered twins. Lovely and lively and—most of all—healthy, the cubs enchanted Washingtonians and breathed new hope into the future of zoo populations of this vulnerable species, whose habitat is dwindling and fragmenting. The male cub, Bernardo, later moved to the Tulsa Zoo. His sister, Chaska, went to Maryland's Salisbury Zoo.

Main Photo: Barbara Statas
Inset Photo: Meghan Murphy/NZP

AT THE ZOO

Technology helped animal care staff monitor the cubs even before their arrival. Keepers trained Billie Jean to cooperate with ultrasounds, allowing Zoo staff to chart the progress of her pregnancy.

SUNDAY MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY

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Father's Day
Delight Dad with an adopted Zoo animal at fonz.org/adopt.htm.

Summer Safari Day
Camp begins

Flag Day

Summer Solstice

World Oceans Day



JULY



Smaller and far fewer in number than their African cousins, **Asian elephants** are literally losing ground as their habitat shrinks and fragments. Adding to conservationists' worries is the difficulty of breeding these behemoths in human care. Few zoos have the facilities for an appropriate-sized herd (key to the gray giants' reproductive lives) or for adult males, which are extremely powerful and can be dangerous. As a result, aging zoo populations are not reproducing enough to replace themselves with new generations.

Main Photo: Cynthia Anderson
Inset Photo: Meghan Murphy/NZP

AT THE ZOO

Shipping elephants to potential mates is no small task, so in 2000, an international team of reproductive scientists developed a way to artificially inseminate Shanthi (above), one of the Zoo's females, with sperm from a male in Calgary. A year and a half later, she gave birth to Kandula (top).

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AUGUST



Invertebrates, creatures without backbones, are the original 99 percent, making up all but a fraction of the animal kingdom. They include insects, spiders, octopuses, crabs, jellyfish, corals, **anemones** (top), and countless other organisms. Many invertebrates are ocean dwellers, exquisitely adapted to specific marine habitats. But oceans are changing, growing warmer and more acidic. That raises concerns for animals' survival, particularly in coral reefs, rich ecosystems that are home to a quarter of all marine species.

Main Photo: Barbara Statas
Inset Photo: Meghan Murphy/NZP

AT THE ZOO

Using techniques developed while working with corals in the wild, Zoo staff were the first to successfully breed and raise **Tealia red anemones** (above) in human care. Each young polyp is smaller than the tip of a pencil.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		<div>July 2013</div> <div>S M T W T F S</div> <div>1 2 3 4 5 6</div> <div>7 8 9 10 11 12 13</div> <div>14 15 16 17 18 19 20</div> <div>21 22 23 24 25 26 27</div> <div>28 29 30 31</div>	<div>September 2013</div> <div>S M T W T F S</div> <div>1 2 3 4 5 6 7</div> <div>8 9 10 11 12 13 14</div> <div>15 16 17 18 19 20 21</div> <div>22 23 24 25 26 27 28</div> <div>29 30</div>	1	2	3
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Visit fonz.org/join.htm to join or upgrade your membership and be eligible for advance Boo at the Zoo tickets.



SEPTEMBER



Endangered in the wild and difficult to breed in zoos, **fishing cats** are native to Asia, where they dwell amid thick foliage near streams and other bodies of water. The 15-to-25-pound cats get their name from their crafty hunting technique: pawing the water's surface to mimic the movements of an insect, thereby luring hungry fish to draw near. When a fish appears, the cat dives into the water to snatch it.

Main Photo: Barbara Statas
Inset Photo: Clyde Nishimura

AT THE ZOO

May 2012 brought a milestone in the Zoo's long history: the birth of our first fishing cat kittens, one male and one female. Because their genes are relatively rare, the twins are a great addition to the North American zoo population.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
1	2	3	4	5	6	7	
	Labor Day		Rosh Hashanah begins at sundown				
8	9	10	11	12	13	14	
Grandparents' Day					Yom Kippur begins at sundown		
15	16	17	18	19	20	21	
Hispanic Hertiage Month begins							
22	23	24	25	26	27	28	
29	30	<div>August 2013</div> <div>S M T W T F S</div> <div>1 2 3</div> <div>4 5 6 7 8 9 10</div> <div>11 12 13 14 15 16 17</div> <div>18 19 20 21 22 23 24</div> <div>25 26 27 28 29 30 31</div>		<div>October 2013</div> <div>S M T W T F S</div> <div>1 2 3 4 5</div> <div>6 7 8 9 10 11 12</div> <div>13 14 15 16 17 18 19</div> <div>20 21 22 23 24 25 26</div> <div>27 28 29 30 31</div>		Visit fonz.org/join.htm to upgrade your membership and get a free car pass for the Autumun Conservation Festival.	
Fiesta Musical							



OCTOBER



Named for the flaps of skin dangling below their beaks, **wattled cranes** are the largest of Africa's six crane species. They stand six feet tall and weigh about 14 pounds. The purpose of the birds' signature feature remains something of a mystery, but the wattle can indicate an animal's state of mind. When stressed or asserting dominance, cranes extend their wattles, which they contract when frightened or submissive. Wattled cranes are classified as vulnerable in the wild.

Main Photo: Barbara Statas
Inset Photo: Mehgan Murphy /NZP

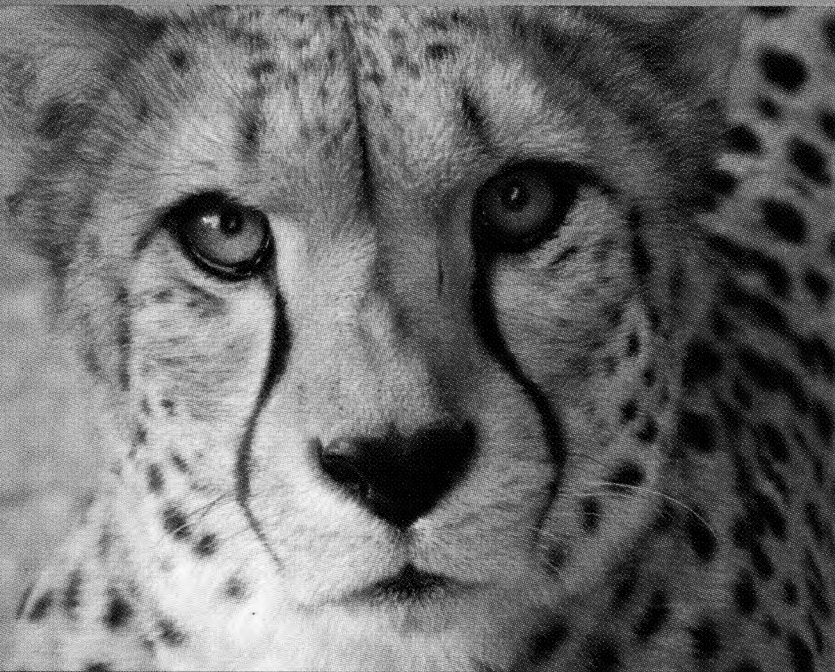
AT THE ZOO

The Smithsonian's National Zoo is one of a handful of U.S. zoos breeding wattled cranes. Four have hatched at the Bird House since 2007.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<div>September 2013</div> <div>S M T W T F S</div> <div>1 2 3 4 5 6 7</div> <div>8 9 10 11 12 13 14</div> <div>15 16 17 18 19 20 21</div> <div>22 23 24 25 26 27 28</div> <div>29 30</div>	<div>November 2013</div> <div>S M T W T F S</div> <div>1 2</div> <div>3 4 5 6 7 8 9</div> <div>10 11 12 13 14 15 16</div> <div>17 18 19 20 21 22 23</div> <div>24 25 26 27 28 29 30</div>	1	2	3	4	5
6	7	8	9	10	11	12
Autumn Conservation Festival (SCBI)						Autumn Conservation Festival (SCBI)
13	14	15	16	17	18	19
	Columbus Day					
20	21	22	23	24	25	26
					Boo at the Zoo	Boo at the Zoo
27	28	29	30	31		
Boo at the Zoo		Birthday Party Priority Registration begins Visit fonz.org/join.htm to join or upgrade your membership and be eligible.		Halloween		



NOVEMBER



Earth's fastest land animals, **cheetahs** are notoriously hard to breed in human care. In 2011, only 13 cubs were born in all of North America—about a third of what is needed for a self-sustaining population. Drawing on research from the wild, the Zoo's Cheetah Conservation Station (at Rock Creek) and Cheetah Science Facility (in Front Royal) were carefully—and successfully—designed to encourage breeding. Since 2004, Zoo cheetahs at the two sites have produced six litters of cubs.

Main Photo: Jacqueline T. Karel
Inset Photo: Jessie Cohen/NZP

AT THE ZOO

In April 2012, Zoo veterinarians performed a cesarean section—a rare and risky procedure for cheetahs—on a cat at Front Royal, extracting three cubs, one of whom beat the odds and survived.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			<div>October 2013</div> <div>S M T W T F S</div> <div>1 2 3 4 5</div> <div>6 7 8 9 10 11 12</div> <div>13 14 15 16 17 18 19</div> <div>20 21 22 23 24 25 26</div> <div>27 28 29 30 31</div>	<div>December 2013</div> <div>S M T W T F S</div> <div>1 2 3 4 5 6 7</div> <div>8 9 10 11 12 13 14</div> <div>15 16 17 18 19 20 21</div> <div>22 23 24 25 26 27 28</div> <div>29 30 31</div>	1	2
		Simplify your holiday shopping by visiting fonz.org/gift.htm and giving the gift of membership			American Indian Heritage Month begins	
3	4	5	6	7	8	9
Daylight Saving Time ends		Election Day Birthday Party Registration begins				
10	11	12	13	14	15	16
	Veterans Day					
17	18	19	20	21	22	23
24	25	26	27	28	29	30
			Hanukkah begins at sundown	Thanksgiving	ZooLights begins	



DECEMBER



Few zookeeping challenges rival the intense efforts to breed our **giant pandas**. Our first female, Ling-Ling, bore five cubs, none of which survived. Our second female, Mei Xiang (top), gave birth in 2005 to a male, Tai Shan (above). He delighted the city and the world by growing into a robust young adult. After Tai Shan, Mei Xiang went through a number of pseudopregnancies. She gave birth again in 2012, but the cub died a week later. Scientists continue to unravel the reproductive mysteries of this endangered species.

Main Photo: Barbara Sorber
Inset Photo: Jessie Cohen/NZP

AT THE ZOO

Scientific expertise played a key role in both of Mei Xiang’s pregnancies. Each cub was conceived via artificial insemination, and the 2012 procedure made use of sperm cryogenically preserved since 2005.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	<div>November 2013<div>SMTWTFSS</div><div>12</div><div>3456789</div><div>10111213141516</div><div>17181920212223</div><div>24252627282930</div></div>	<div>January 2014<div>SMTWTFSS</div><div>1234</div><div>567891011</div><div>12131415161718</div><div>19202122232425</div><div>262728293031</div></div>	<div>Delight a loved one with an adopted Zoo animal at fonz.org/adopt.htm</div>	
		Christmas Eve	Christmas Day	Kwanzaa begins		Winter Solstice
		New Year's Eve				Endangered Species Act Passed, 1973



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